

*b7c
b7d*

[an operating system executed by the processing unit, wherein the operating system includes a procedure for accessing a register set of a UART corresponding to the first communications port;] and

a communications driver executed by the processing unit, the communication driver comprising a UART emulation which in response to an access [by the procedure for accessing the] targeted at a register set of a UART corresponding to the first communication port, converts the access as required for the register set and address assignment of the device.

2. The system of claim 1, wherein the local bus comprises an ISA bus.

3. The system of claim 1, wherein the device coupled to the local bus, further comprises:

a comparator adapted for receiving a data signal from the local bus;

a pattern generator coupled to the comparator, wherein the pattern generator generates a signal for comparison with the data signal;

a counter operably coupled to the comparator, wherein the counter resets to an initial state following the comparator indicating the data signal is not equal to the pattern signal and advances toward a final state following the comparator indicating the data signal equals the pattern signal; and

a register coupled to the counter and adapted to receive a signal from the local bus, wherein in response to the counter reaching the final state, the register latches from the local bus a value which indicates the base address of the I/O slot occupied by the device.

4. (Previously Amended) A method for communication between a computer and a device having an I/O interface which differs from the I/O interface of a UART, comprising:

coupling the I/O interface of the device to a local bus in the computer;

allocating in a memory of the computer, storage locations which correspond to registers of a UART; and

transmitting information via the local bus between the I/O interface of the device and the allocated storage locations in the memory of the computer.

TECH CENTER 27

RECEIVED
11-1-1993

5. (Previously Amended) The method of claim 4, further comprising transmitting from an application to a communications driver a packet formatted for a UART, wherein the communication driver updates a value in the storage locations according to a value in the packet.

6. (Previously Amended) The method of claim 5, wherein the communication driver performs the step of transmitting by:

converting a value from the allocated storage to a converted value compatible with the I/O interface of the device; and
writing the converted value to a register in the device via the local bus.

7. (Previously Amended) The method of claim 4, wherein transmitting further comprises:

reading values from a register of the device via the local bus; and
updating the storage locations according to the value read.

8. (Previously Amended) The method of claim 7, further comprising transmitting from a communications driver to an application information from the storage locations.

10. (Previously Amended) The method of claim 9, wherein setting the base device address comprises:

sensing, by the device, of a data signal on the local bus;
comparing the data signal to a signal from a pattern generator in the device;
advancing a state indicator toward a final state in response to the data signal being equal to the signal from the pattern generator;
repeating the steps of sensing, comparing, and advancing until the state indicator reaches the final state; and
setting the base address of the device to a value indicated by a signal on the local bus in response to the state indicator reaching the final state.

Please add the following claims.

*Sub
D16*

--17. A host signal processing modem comprising:

a device adapted for connection to a local bus of a host computer, wherein the device occupies an I/O slot on the local and is accessible at a first set of address, the device having a register set with an address assignment in the first set of addresses that differs from a standard address assignment of a register set for a UART corresponding to the I/O slot; and

a communications driver executable by the host computer, the communication driver comprising a UART emulation, wherein in response to the host computer executing a procedure that targets an access at a register set of a UART, the UART emulation converts the access as required for accessing the register set and address assignment of the device.

B2

18. The modem of claim 17, wherein the procedure that targets an access at the register set of a UART is part of an operating system that the host computer executes.

*Sub
D17*

19. A communication program executable by a host computer, the communication program comprising:

a UART emulation that in response a procedure requesting access to a register of a UART at a first port, instead accesses storage locations in a main memory of the computer; and

an I/O handler which transfers values between the storage locations in main memory and a register set of a non-standard device having an address assignment that differs from that of a UART, wherein:

the host computer runs an operating system that logically assigns a first port to a UART; and

the register set of the non-standard device physically occupies addresses corresponding to the first port.

20. The communication program of claim 19, wherein the communication program is a driver operating under the operating system.